DRAFT ENVIRONMENTAL ASSESSMENT

R. L. Frank Septic Service, Inc.

Land Application Site

Park City, Montana

Solid Waste Section

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TABLE OF CONTENTS

TABLE OF CONTENTS 2

TABLES 3

FIGURES 3

ACRONYMS 4

1. NEED FOR PROPOSED ACTION 5

1.1 SUMMARY 5
1.2 BACKGROUND 5
1.3 PURPOSE AND NEED 6
1.4 LOCATION DESCRIPTION AND ANALYSIS AREA 6
1.5 COMPLIANCE WITH MEPA 9
1.6 PUBLIC INVOLVEMENT 9

2. DESCRIPTION OF ALTERNATIVES 9

2.1 NO ACTION ALTERNATIVE 9
2.2 PROPOSED ACTION 9
2.2.1 LAND APPLICATION SITE OPERATIONS 9
2.2.2 EQUIPMENT AVAILABLE AND PUMPER TRUCK REQUIREMENTS 11
2.2.3 AMOUNT AND EXTENT OF SEPTAGE APPLICATION 11

3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES BY RESOURCE 12

3.1 LOCATION DESCRIPTION AND ANALYSIS AREA 12
3.2 IMPACTS 12
3.2.1 WILDLIFE AND HABITATS 14
3.2.1.1 THREATENED AND ENDANGERED SPECIES 15
3.2.1.2 SPECIES OF CONCERN 15
3.2.2 SOILS AND VEGETATION 16
3.2.3 GEOLOGY 18
3.2.4 HYDROLOGY AND HYDROGEOLOGY 19
3.2.4.1 SURFACE WATER 19
3.2.4.2 GROUNDWATER 20
3.2.5 AESTHETICS AND NOISE 22

3.2.6 HUMAN HEALTH & SAFETY 23
3.2.7 INDUSTRIAL, COMMERCIAL, AND AGRICULTURAL ACTIVITIES 23
3.2.8 RECREATION, LAND USE, AND TOURISM 23
3.2.9 CULTURAL UNIQUENESS AND DIVERSITY 24
3.2.10 DEMAND FOR GOVERNMENT SERVICES 24
3.2.11 SOCIOECONOMICS 24
3.2.12 TRAFFIC 25
3.3 REGULATORY RESTRICTIONS 25
3.4 CUMULATIVE AND SECONDARY IMPACTS 25
4. FINDINGS 26
5. OTHER GROUPS OR AGENCIES CONTACTED OR CONTRIBUTING TO THE EA 27
6. AUTHORS 27
7. REFERENCES: 28

TABLES

Table 1: Land Application Operational Requirements 10
Table 2: Land Application Site Setback Requirements 10
Table 3: Impacts 13
Table 4: Federally Established Species List 15
Table 5: Montana Recognized Species List 16
Table 6: USDA-NRCS, Custom Soil Resource Report, 2021 17

FIGURES

Figure 1: Proposed Land Application Site 7
Figure 2: Analysis Area 8
Figure 3: Soil Resource Map 17
Figure 4: Surface Water 20

Figure 5: Location of Nearby Groundwater Production Wells..... 22

ACRONYMS

RLF – R. L. Frank Septic Service, Inc.

ARM – Administrative Rules of Montana

AAR– Annual Application Rate

Draft EA – Draft version of an environmental assessment before public comment

Final EA – Final version of an environmental assessment after public comment

DEQ – Montana Department of Environmental Quality

DNRC – Montana Department of Natural Resources and Conservation

EA – Environmental Assessment

EIS – Environmental Impact Statement

GWIC – Ground Water Information Center

MBMG – Montana Bureau of Mines and Geology

MCA – Montana Code Annotated

MEPA – Montana Environmental Policy Act

MNHP – Montana Natural Heritage Program

O&M – Operation and Maintenance

Proposed Action – Approving a new septage land application site

Septic Rules– ARM Title 17, chapter 50, subchapter 8, "Cesspool, Septic Tank, and Privy Cleaners"

SDLA – "Septic Disposal Licensure Act", Title 75, chapter 10, part 12, MCA

Site – Approximately 199 acres of Richard Popp property located 4.8 miles southeast of Park City at 41 Young's Point Road in Stillwater County, Montana. Several separate parcels comprise the Site.

SWL – Static Water Level

USFWS – United States Fish and Wildlife Service

USGS – United States Geological Survey

1. NEED FOR PROPOSED ACTION

1.1 SUMMARY

This draft environmental assessment (Draft EA) was prepared for the septage land application site proposed by R. L. Frank Septic Service (RLF), in accordance with the Montana Environmental Policy Act (MEPA). On December 20, 2021, the Department of Environmental Quality (DEQ) received an application from RLF for the licensing of a new septage land application site (Proposed Action). RLF proposes the land application of septage on approximately 199 acres of Richard Popp property located 4.8 miles southeast of Park City at 41 Young's Point Road in Stillwater County, Montana (Site, **Figure 1**).

1.2 BACKGROUND

In June 2020, RLF obtained a license from DEQ to pump, and land apply septage in Montana. RLF is currently approved to land apply septage on four land application sites in Stillwater County. RLF is proposing to add this Site to their license.

This application was signature-certified by Stillwater County prior to DEQ's environmental review. According to the Administrative Rules of Montana (ARM), DEQ cannot review a new site disposal application unless it has been previously certified by the local county health officer or designated representative.

Septage is the liquid and solid material removed from a septic tank, cesspool, portable toilet, or similar treatment works that receives only domestic waste and wastewater collected from household or commercial operations. Naturally occurring bacteria within wastewater reside in the typical septic tank, digesting organic matter over time. Pre-treated liquid (effluent) typically exits the septic tank through a perforated pipe and enters its leach field, leaving floating materials and solids in the tank for further digestion. Septic tanks are commonly pumped every two to five years depending on tank capacity and number of users. Septage is either delivered to a wastewater treatment plant for secondary treatment, land applied as proposed in this document, or dewatered and landfilled at a licensed Class II municipal solid waste landfill facility. Septage is different than sewage, which is wastewater and excrement that has not been treated and is conveyed in sewer systems. Septage is what Montana's septic tank pumpers land apply.

As Montana's population and seasonal visitation grow, the demand for disposal of septage increases. ***Wastewater treatment plants can accept only limited amounts of septage from pumpers***. Land application by pumpers allows for safe disposal of septage without overloading Montana's wastewater treatment plants. Land application also reduces Montana farmers' reliance on chemical fertilizers to improve soil. RLF's application was submitted to DEQ under the laws and rules for licensing septic pumpers, demonstrating their intent to meet the minimum requirements for the pumping and land application of septage.

When properly managed, land application of septage is a beneficial resource, providing economic and environmental benefits with no adverse public health effects. A licensed land application program recognizes and employs practices that maximize those benefits. Septage

does not include prohibited material (e.g., garbage or tampons) removed from a septic tank or similar treatment works by pumping.

1.3 PURPOSE AND NEED

DEQ's purpose and need in conducting the environmental review is to act upon RLF's application by evaluating potential impacts of the Proposed Action. If DEQ approves the application, DEQ will add the Site to their existing license. DEQ's decision to approve or deny the application depends upon the consistency of the application with the following:

1. Septage Disposal Licensure Act (SDLA);
2. Administrative Rules of Montana (ARM) Title 17, Chapter 50, subchapter 8, "Cesspool, Septic Tank, and Privy Cleaners" (Septic Rules);
3. the Clean Air Act of Montana; and
4. Montana Water Quality Act.

RLF proposes to comply with all the rules noted above.

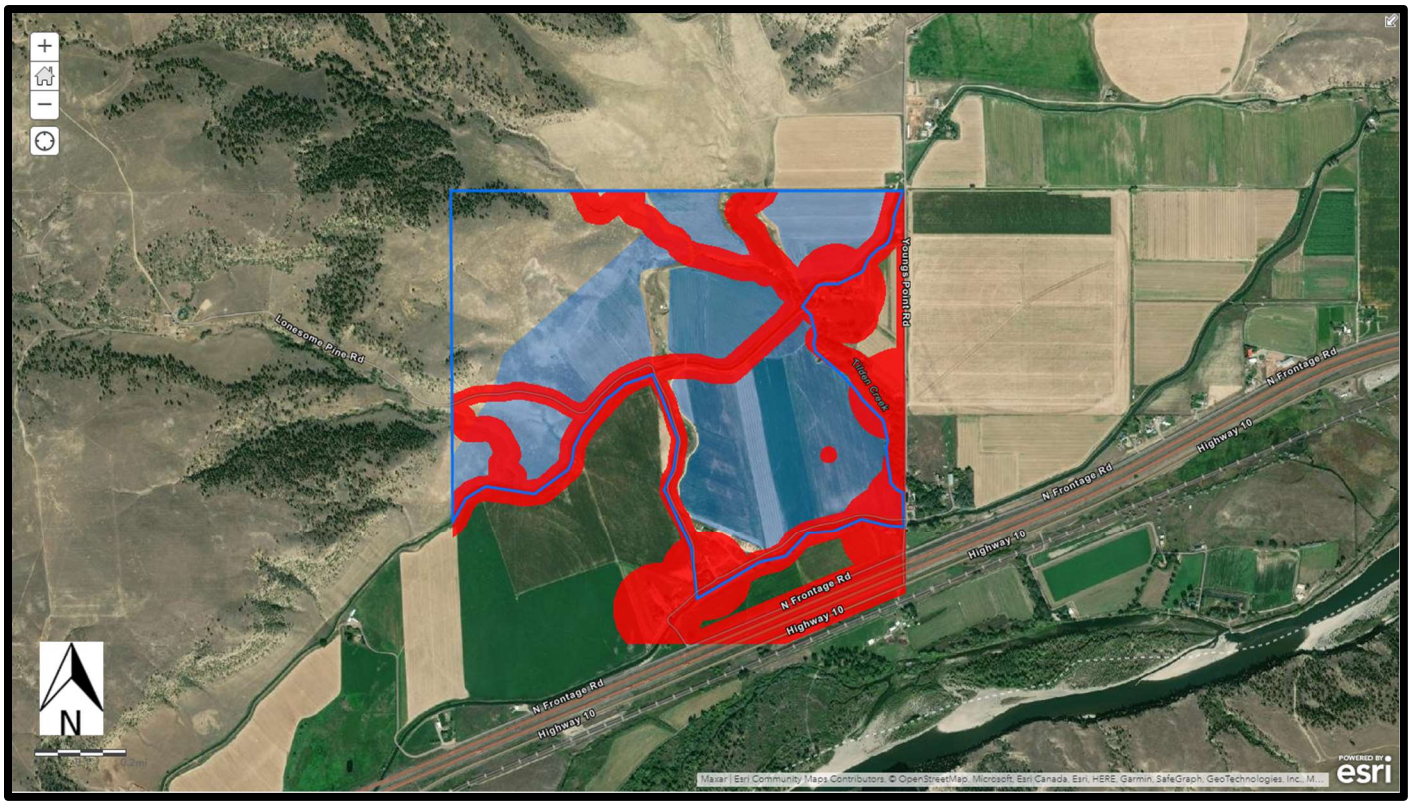
1.4 LOCATION DESCRIPTION AND ANALYSIS AREA

The proposed Site is located on Richard Popp property in Section 33, Township 2 South, Range 22 East in Stillwater County, Montana.

Of the proposed 199 acres, approximately 140.5 acres of the Site would be used to grow corn, hay, and beans. The remaining 58.5 acres of the Site would be maintained as dryland pasture. The Site would be divided into separate parcels for rotation and production of crops and pasture grasses.

A private drive would be used to access the Site via Young's Point Road at the southeasternmost point of the Site (**Figure 1**). The area being analyzed as part of this environmental review includes the immediate project area (**Figure 2**) and neighboring lands surrounding the analysis area as reasonably appropriate for the impacts being considered. The analysis area depends on the resource under evaluation, as noted in the subparts of *Section 3*.

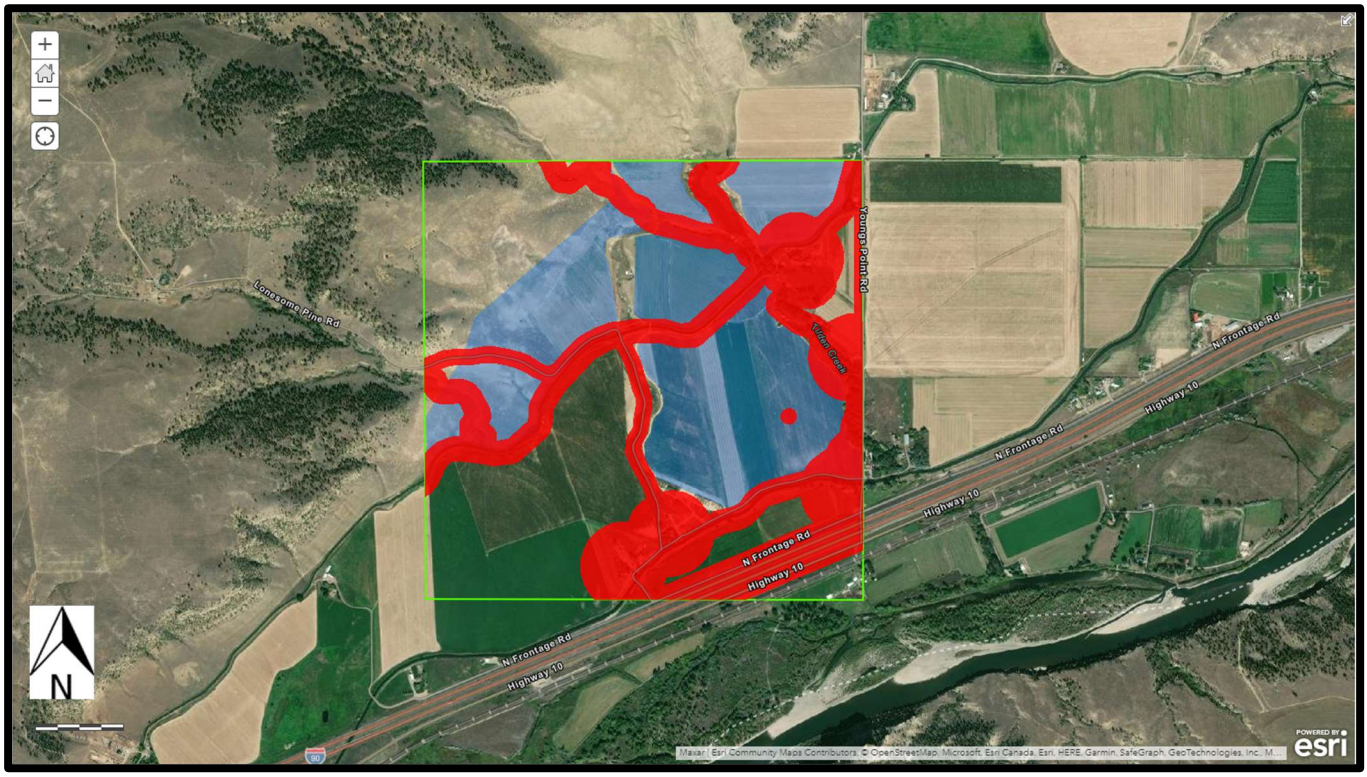
Figure 1: Proposed Land Application Site
(approximate Site shaded in light blue; applicable setbacks in red; Richard Popp property outlined in dark blue)



*Source: ArcGIS (**NOT TO SCALE**)*

Figure 2: Analysis Area

(approximate Site shaded in light blue; applicable setbacks in red; Section 33 outlined in green)



*Source: ArcGIS (**NOT TO SCALE**)*

1.5 COMPLIANCE WITH MEPA

Under MEPA, DEQ is required to prepare an environmental review for state actions that may have an impact on the human environment. Approval of the Proposed Action is considered a state action that may have an impact on the human environment. Therefore, DEQ must prepare an environmental assessment. This Draft EA analyzes the Proposed Action and reasonable alternatives to the Proposed Action and discloses potential impacts that may result from such actions. DEQ determined an EA was the appropriate level of review based on consideration of the criteria set forth in ARM 17.4.608.

1.6 PUBLIC INVOLVEMENT

DEQ released this Draft EA to present its initial findings described in *Section 4*. ***A 30-day public comment period*** commenced on the release of the document and ***will end on April 9, 2022***. A notice of availability for the Draft EA was sent to adjacent landowners and other interested parties. A press release was sent to area media outlets and posted to the State Newsroom the day this Draft EA was published. This Draft EA may be viewed at: https://deq.mt.gov/public/publiccomment.

2. DESCRIPTION OF ALTERNATIVES

This Section describes the Proposed Action and No Action alternatives. MEPA requires the evaluation of reasonable alternatives to the Proposed Action. Reasonable alternatives are achievable under current technology and are economically feasible, as determined by the economic viability of similar projects with similar goals, conditions, and physical locations. According to Section 75-1-220(1), MCA, reasonable alternatives are determined without regard to the economic strength of the applicant but may not include an alternative facility or an alternative to the proposed project itself.

According to ARM 17.4.609(3)(f), an environmental assessment (EA) must include alternatives whenever reasonable and prudent. DEQ has not considered any other alternatives to the Proposed Action, beyond the no action alternative, because RLF's application and operation and maintenance comply with the applicable laws and rules pertaining to land application of septage in Montana.

2.1 NO ACTION ALTERNATIVE

Under the No Action Alternative, the Site would not be approved by DEQ. Therefore, the Site could not be used by RLF, and disposal of septage would have to occur at other licensed treatment works or land application sites.

2.2 PROPOSED ACTION

RLF is proposing the land application of septage on the Site, described in *Section 1.1*.

2.2.1 LAND APPLICATION SITE OPERATIONS

The operational and setback requirements for land application of septage at this Site are provided in **Tables 1 and 2**:

Table 1: Land Application Operational Requirements

ARM Reference	Specific Restrictions
17.50.809(10)	All non-putrescible litter must be removed from the land application site within 6 hours of application.
17.50.809(12)	Pumpings may not be applied at a rate greater than the crop's annual application rate (AAR) for nitrogen.
17.50.810(1)	Pumpings may not be applied to flooded, frozen, or snow-covered ground if the pumpings may enter state waters.
17.50.811(3)	Pumpings may be applied only if the person first performs one of the following vector attraction and pathogen reduction methods: • injection below the land surface so no significant amount remains on the land surface within one-hour of injection; • incorporation into the soil surface's plow layer within 6 hours of application; • addition of alkali material so that the pH is raised to and remains at 12 or higher for a period of at least 30 minutes; or, • management as required by 17.50.810 when the ground is frozen

Table 2: Land Application Site Setback Requirements

ARM Reference	Specific Restrictions
17.50.809(1)	Pumpings may not be applied to land within ***500 feet of any occupied or inhabitable building***.
17.50.809(2)	Pumpings may not be applied to land within ***150 feet of any state surface water, including ephemeral or intermittent drainages and wetlands***.
17.50.809(3)	Pumpings may not be applied to land within ***100 feet of any state, federal, county, or city-maintained highway or road***.
17.50.809(4)	Pumpings may not be applied to land within ***100 feet of a drinking water supply source***.
17.50.809(6)	Pumpings may not be applied to land with ***slopes greater than 6%***.
17.50.809(8)	Pumpings may not be applied to land where seasonally high groundwater is 6 feet or less below ground surface.

Land application would be limited to areas approved by DEQ. The Site would not be used until boundaries have been marked and approved by DEQ or the local county sanitarian.

RLF would be required to log the type and amount of pumpings land applied annually as well as the dates applied. Disposal logs would be submitted to DEQ semiannually. DEQ would verify the Site's annual application rate (AAR) and may periodically monitor the soils for adherence to the proposed maximum AAR.

2.2.2 EQUIPMENT AVAILABLE AND PUMPER TRUCK REQUIREMENTS

RLF proposes to use the following equipment for land application activities:

1. 2001 Freightliner Century with a 3,600-gallon tank
2. 2007 Freightliner Columbia with a 3,400-gallon tank

The Septic Tank, Cesspool, and Privy Cleaner Vehicle Inspection Form was created by DEQ to guide the vehicle inspection. The county health officer's (or designated representative's) signature on the vehicle inspection form certifies that the vehicle is equipped with the necessary equipment to adequately screen and spread septage while land applying. The following questions are on the form to verify compliance with the Septic Rules:

1. Does the vehicle show signs of leakage?
2. Is the vehicle equipped with the proper spreading equipment?
3. Is the spreading equipment mounted on the vehicle or separate?
4. If required to screen septage before land applying, is the vehicle, or site, equipped with the proper screening equipment?
5. Is the spreading equipment approved for use?
6. Is the screening equipment approved for use?
7. Make/Model of Vehicle
8. Tank Size

This form was certified by the Stillwater County health officer for each vehicle and submitted by RLF with their application.

2.2.3 AMOUNT AND EXTENT OF SEPTAGE APPLICATION

Land application must not exceed the AAR (gallons per acre per year) based on:

1. The nitrogen content of the waste applied at the Site (EPA, 1993); and
2. The crop nitrogen yield for the crop or other vegetation at the Site.

The AAR for septage is calculated as follows:

$$\textbf{AAR} = \frac{\text{minimum crop nitrogen requirement (lbs./acre/year)}}{0.0026 \text{ (lbs./gallon)}}$$

140.5 acres of the Site would be pasture grass. 58.5 acres of the Site would grow corn, hay, and beans. The nitrogen requirement for pasture grass is 75 pounds per acre per year based on a conservative yield expectation at the Site (Fertilizer Guidelines for Montana Crops, 2005; EPA, 1993). The nitrogen requirement for corn, hay, and beans is 100 pounds per acre. For the pasture grass, the resulting AAR for septage is 28,846 gallons per acre per year, which is equal to approximately 1.06 inches of liquid applied annually per acre. For the corn, hay, and beans, the resulting AAR for septage is 38,462 gallons per acre per year, which is equal to approximately 1.42 inches of liquid applied annually

per acre. For comparison, the average annual precipitation in the Park City area is 13.3 inches per year.

Land application of septage at the AAR is alternated annually between separate parcels to allow for agronomic crop uptake of the applied nitrogen. Plants can utilize nitrogen available from the septage if the volume of septage applied each year does not exceed the AAR. When land application is rotated, one parcel is used every year. For example, if 100 acres are proposed for land application, 50 acres would be used one year and the other 50 acres would be used similarly the next year. In this case, RLF would rotate the Site's parcels used each year. The residual soil nutrient levels at each parcel would vary over time. DEQ may periodically monitor the soil for nutrient content to determine compliance with the AAR.

With the most conservative calculations, the Richard Popp property could annually treat the proposed 500,000 gallons of waste without exceeding the Site AAR each year.

3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES BY RESOURCE

3.1 LOCATION DESCRIPTION AND ANALYSIS AREA

The location of the Site is described in *Section 1.1* of this Draft EA. The analysis area includes land and resources in and around the Site. The analysis area is described in each subsequent section depending on the resource.

3.2 IMPACTS

Table 3 shows a summary of the impacts of the No Action Alternative and the Proposed Action.

Direct impacts are those that occur at the same time and place as the action that triggers the effect.

Secondary impacts are those that occur at a different location or later time than the action that triggers the effect.

Cumulative impacts are the collective impacts on the human environment when a specific action is considered in conjunction with other past, present, and future actions by location and type. Cumulative impact analysis under MEPA requires an agency to consider all past and present state and non-state actions. Related future actions must also be considered when these actions are under concurrent consideration by any state agency through pre-impact statement studies, separate impact statement evaluation, or permit processing procedures. Cumulative impact analyses help to determine whether an action, combined with other activities, would result in significant impacts.

Under the No Action Alternative, there would be no impacts for any resource.

Table 3: Impacts

Resource	Alternative 1 – No Action	Alternative 2 – Proposed Action
Wildlife and Habitats	No impact.	Direct and Secondary Impact: Minor. Wildlife tends to avoid land application sites due to human scent and activities and would relocate. (See *Section 3.2.1*) No cumulative impacts.
Soils and Vegetation	No impact.	Direct and Secondary Impact: Minor beneficial impact. The quality of soils and crop yields would be enhanced both immediately and in the future because of the Proposed Action. (See *Section 3.2.2*) No cumulative impacts.
Geology	No impact	No direct, secondary, or cumulative impacts. (See *Section 3.2.3*)
Hydrology and Hydrogeology	No impact.	No direct, secondary, or cumulative impacts. (See *Section 3.2.4*)
Aesthetics and Noise	No impact.	Direct and Secondary Impact: Minor impact. Land application activities resemble agricultural and commercial activities occurring in the surrounding area. Odor would largely be controlled by daily incorporation into the soil via harrowing. (See *Section 3.2.5*) No cumulative impacts.
Human Health & Safety	No impact.	No direct, secondary, or cumulative impacts. (See *Section 3.2.6*)
Industrial, Commercial, and Industrial Activities	No impact.	No direct, secondary, or cumulative impacts. (See *Section 3.2.7*)

Recreation and Land Use	No impact.	No direct, secondary, or cumulative impacts. (See *Section 3.2.8*)
Cultural Uniqueness and Diversity	No impact.	No direct, secondary, or cumulative impacts. (See *Section 3.2.9*)
Demand for Government Services	No impact.	Direct and Secondary Impact: Minor. Stillwater County sanitarian and DEQ would conduct periodic inspections of the Site. (See *Section 3.2.10*) No cumulative impacts.
Socioeconomics	No impact.	Direct and Secondary Impact: Minor. There is a lack of literature or studies on potential impacts from land application sites on surrounding real property values in Montana. If any impacts occur, they are expected to be minor. (See *Section 3.2.11*) No cumulative impacts.
Traffic	No impact.	Direct and Secondary Impact: Minor. RLF would access the Site via a private drive off Young's Point Road, which currently supports traffic to homes in the area. (See *Section 3.2.12*) No cumulative impacts.

3.2.1 WILDLIFE AND HABITATS

Impacts to wildlife and habitats from the Proposed Action would be minor.

Wildlife tends to avoid areas where human scents and activities are present including, but not limited to, septage land application sites. Montana Fish, Wildlife & Parks (FWP) manages the overall wildlife populations of the region. Species of fish, amphibians, and aquatic invertebrates and plants are not included on the following lists because land application activities would not impact nearby perennial waters based on STP requirements for minimum setbacks, maximum slopes, and elimination of runoff (see *Sections 2.2.1* and *3.2.4.1*).

The applicant does not plan to expand the Site beyond the boundaries described in the application. Therefore, no habitats outside the land application areas would be impacted because human activities would be constrained to the Site's boundaries. Odors are expected to be limited to the area immediately surrounding the point of

land application (see *Section 3.2.5*). The Site is in a rural portion of Stillwater County on land used for agricultural production. Adjacent land use in the vicinity of the Site includes a mix of row crop agricultural production, grazing, and grasslands. Beyond the immediate vicinity of the Site, a mixture of riparian areas along the Yellowstone River, grasslands, and wooded foothills provide habitat for species present in the region.

3.2.1.1 THREATENED AND ENDANGERED SPECIES

The U.S. Fish & Wildlife Service's (USFWS) online databases were used to identify plant and animal species at the Site and the associated analysis area (USFWS, 2022). The USFWS species and status listings for Stillwater County, Montana, are shown in **Table 4**:

Table 4: Federally Established Species List

Scientific Name	Common Name	Status
Canis lupus	Gray wolf	Under review
Haliaeetus leucocephalus	Bald eagle	Recovery
Aquila chrysaetos	Golden eagle	Species of concern
Pinus albicaulis	Whitebark pine	Proposed threatened
Charadrius montanus	Mountain plover	Resolved taxon
Lynx canadensis	Canada lynx	Threatened
Centrocercus urophasianus	Greater sage grouse	Resolved taxon
Anthus spragueii	Sprague's pipit	Resolved taxon
Gulo luscus	North American wolverine	Resolved taxon
Ursus arctos horribilis	Grizzly bear	Threatened
Danaus plexippus	Monarch butterfly	Candidate

The Site does not provide the habitat necessary to independently sustain the species listed above. Nearby grasslands, riparian areas, and protected lands provide adequate habitat for any species forced to relocate due to the Proposed Action. Habitat for the whitebark pine exists outside of the immediate vicinity of the Site at points of higher elevation throughout in Stillwater County. The greater sage grouse is addressed separately in *Section 3.2.1.2*. The Proposed Action may deter transient wildlife from passing through the active land application area but impacts to these species are anticipated to be minor.

3.2.1.2 SPECIES OF CONCERN

No impacts to species of concern are anticipated to result from the Proposed Action.

Designation as a species of concern is not a statutory or regulatory classification. Instead, these designations provide a basis for resource

managers and regulators to make proactive decisions regarding species conservation.

The Montana Natural Heritage Program's (MNHP) online databases were accessed for listed species (MNHP, 2022). The MNHP species and status listing for Township 2 South, Range 22 East is shown in **Table 5**.

Table 5: Montana Recognized Animal Species List

Scientific Name	Common Name	Status	GRank/SRank
Ursus arctos	Grizzly bear	Species of concern	G4/S2
Centrocercus urophasianus	Greater sage grouse	Species of concern	G3/S2
Falco peregrinus	Peregrine falcon	Species of concern	G4/S3

The MNHP uses a standardized ranking system developed by The Nature Conservancy and maintained by NatureServe. Each species is assigned two ranks; one represents its global status (GRank), and one represents its status in the state (SRank). The scale is 1-5; 5 means common, widespread, and abundant; 1 means at high risk. Species with a GRank 5 are not included in **Table 5**.

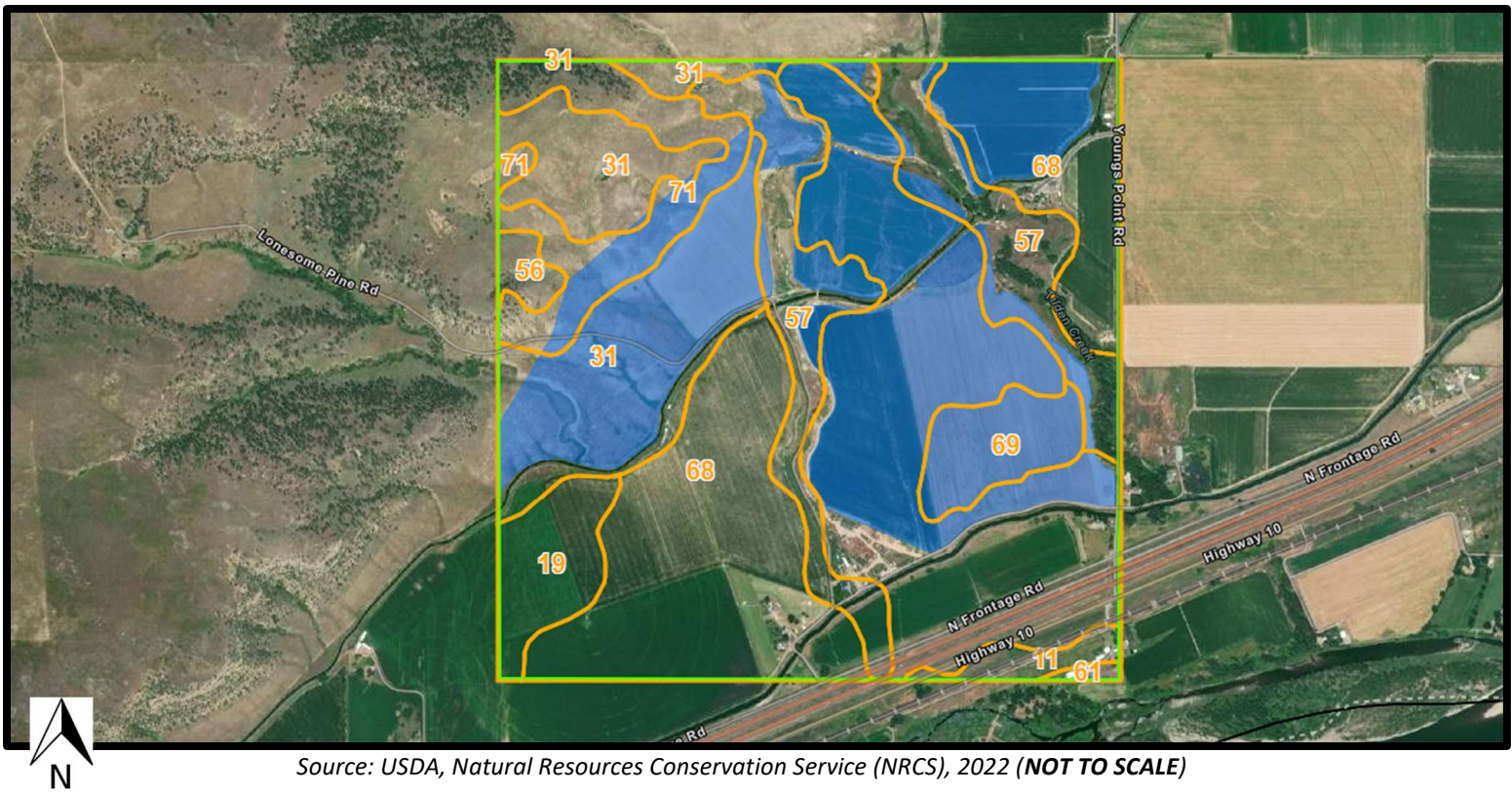
The Site is not located within any recognized level of sage grouse habitat as designated by the Department of Natural Resources and Conservation (DNRC). Abundant recognized habitat areas for the greater sage grouse exist north of the Site in Stillwater and Yellowstone Counties.

3.2.2 SOILS AND VEGETATION

The impact of the Proposed Action to soils and vegetation would be minor.

The US Department of Agriculture (USDA) Natural Resources Conservation Service's (NRCS) National Cooperative Soil Survey databases were accessed for information about the shallow subsurface soils at the Site and surrounding areas (**Figure 3** and **Table 6**).

Figure 3: Soil Resource Map
(Soil unit with delineation in orange, approximate Site without setbacks in blue, outline of Section 33 in green)



*Source: USDA, Natural Resources Conservation Service (NRCS), 2022 (**NOT TO SCALE**)*

Table 6: USDA-NRCS, Custom Soil Resource Report, 2022

Map Unit Symbol	*Map Unit Name*	*Soil Rating*
31	*Lambeth silt loam, 2 to 15 percent slopes*	*Somewhat limited*
57	*Torrifluvents-Camborthids association, gently sloping*	*Not rated*
68	*Yamac loam, 2 to 4 percent slopes*	*Not limited*
69	*Yamac loam, 4 to 8 percent slopes*	*Not limited*
71	*Yawdim-Lambeth-Rock outcrop association, steep*	*Very limited*

Soil types where land application would occur primarily consist of Yamac loams and Lambeth silt loams. The ratings shown in **Table 6** are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the septage is applied, and the method by which the septage is applied. "Not limited" indicates that a soil type has characteristics which are favorable for the specified use. Good performance and low maintenance can be expected. "Somewhat limited" indicates that a soil type has characteristics which are moderately favorable for the specified use. "Very limited" indicates that a soil type has one or more characteristics which are unfavorable for the specified use (NRCS, 2022).

Some parcels within the proposed Site are used to grow pasture grasses, while the majority are used for a rotation of corn, hay, and beans. The MNHP online databases were accessed for listed plant species in the Township 2 South, Range 22 East analysis area (MNHP, 2022). No species were listed for the analysis area. If a plant species of concern is documented to be present at the Site, DEQ would evaluate any potential impacts at that time.

Weed control is managed by Stillwater County. DEQ has not experienced any active or closed land application sites where weeds were abundant beyond what would be considered “typical” for sites where row crop agriculture or grazing is present.

Septage contains nutrients that can reduce the reliance of the farmer or land manager on chemical fertilizers to improve soils. The Proposed Action would add valuable moisture, organic matter, and nutrients to the topsoil, improving the Site’s soil tilth and grass vigor. The quantity and quality of soils and vegetation at the Site would be enhanced by the Proposed Action.

DEQ analyzed how the land application of septage would impact the Site’s environment given the weather of the region. The weather in the area is typical of south-central Montana, classified as warm summer continental climate. The average pan evaporation rate is listed as 41.27 inches per year at the nearest monitoring station. The hot months of June, July, and August coincide with the average Montana septic tank pumper’s busy season. Dry soils, vegetation, and crops in this semi-arid zone would benefit from the added moisture.

3.2.3 GEOLOGY

No geological impacts are anticipated to result from the Proposed Action.

Periodic harrowing of the surface topsoil to incorporate septage would not significantly affect the thickness or character of colluvium that remains on the Site. Septage land application operations would not involve excavation.

The analysis area for geology includes the Site and the surrounding area (beyond a mile from the Site’s boundaries in **Figures 1 and 2**).

South-central Montana is characterized by rolling high plains comprised mostly of deeply eroded and typically sub horizontal Mesozoic to Tertiary and some Paleozoic sedimentary rocks. These ancient, largely marine basins are locally interrupted by younger faulted and folded mountain highlands in the region approaching the Rocky Mountain Front range to the southwest in the Absaroka-Beartooth Plateau.

Numerous local plateaus, mesas, and scattered terrace benches are now found throughout the foothill areas, some still capped by thin remains of the paleo-fluvial gravels of the ancestral Yellowstone River drainage network. Several phases of Holocene paleofluvial gravels have been identified near and beneath the Site associated with the present Yellowstone River.

3.2.4 HYDROLOGY AND HYDROGEOLOGY

The analysis area for hydrology and hydrogeology is the area surrounding the Site, including the listed hydrologic unit code (HUC) -12 watershed for surface water and a radius of 1 mile surrounding the Site for groundwater. Some discussion of regional geology, based on published reports, is also provided. The analysis methods include reviewing wetland and jurisdictional waters information, onsite drilling reports, publications of the Montana Bureau of Mines and Geology (MBMG), and online maps.

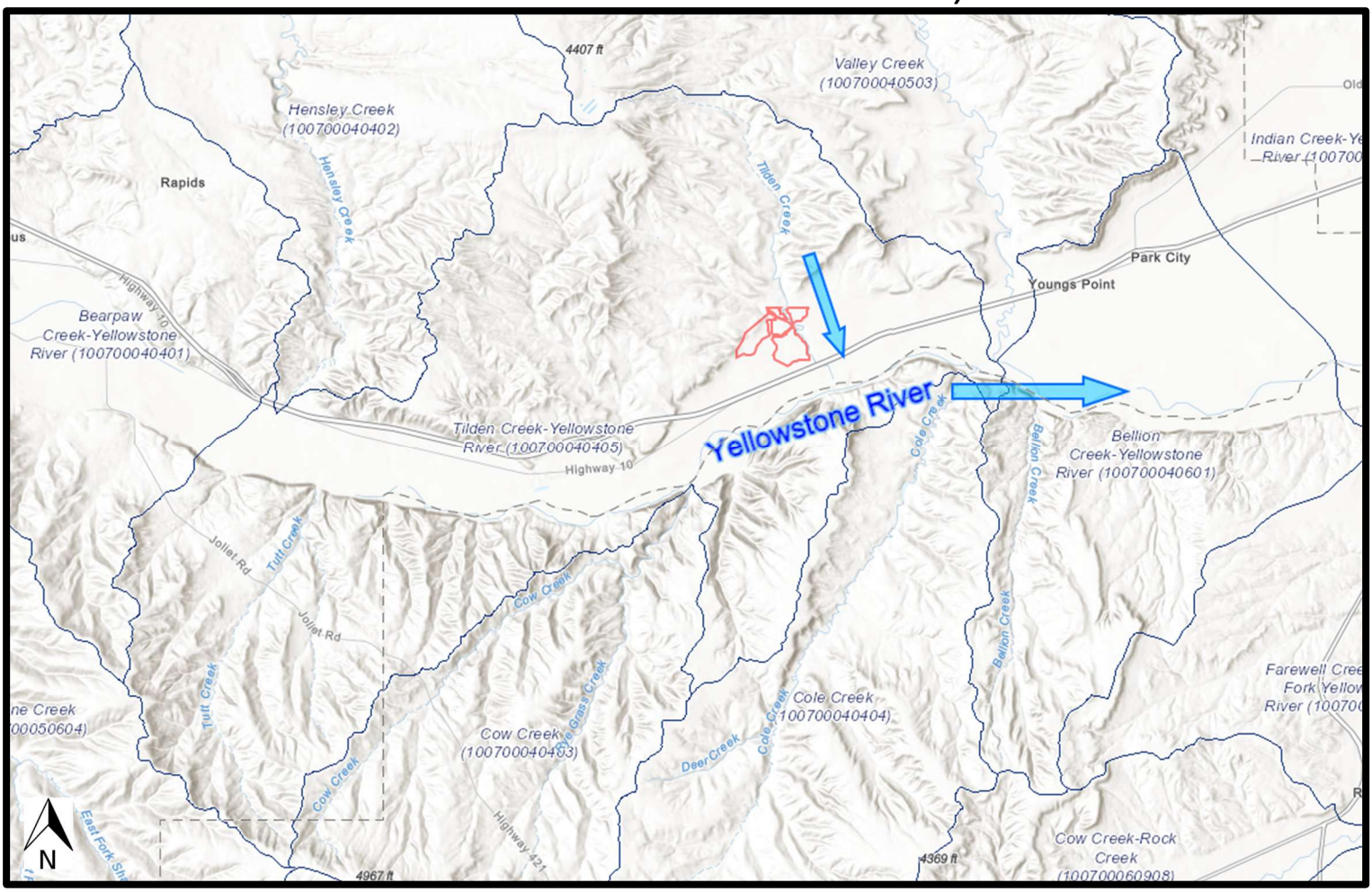
3.2.4.1 SURFACE WATER

No impacts to surface waters are anticipated to result from the Proposed Action.

The Site is located within the Tilden Creek – Yellowstone River watershed, HUC 100700040405 (**Figure 4**). During a major runoff event, surface water from the Site would travel east/southeast via ephemeral and/or intermittent drainages to Tilden Creek and the mainstem Yellowstone River, which lies approximately 0.6 miles southeast of the Site's proposed southeastern boundary.

When a pumper properly and uniformly land applies pumpings, incorporates the material into the soil, rotates parcels, and adheres to setbacks, no impacts to surface water resources are anticipated because no pumpings would be pooled or present at the soil surface to be transported from the Site by any surface water runoff.

Figure 4: Surface Water
(approximate Site in red, flow direction arrow in blue,
HUC-12 watershed boundaries in dark blue)



*Source: Esri/ArcGIS, Montana State Library, USGS, and NRCS (**NOT TO SCALE**)*

Periodic inspections by DEQ for compliance with setbacks near the Site borders, slope restrictions, and runoff patterns would ensure no pumpings enter nearby ephemeral or intermittent drainages.

3.2.4.2 GROUNDWATER

No impacts to groundwater or groundwater wells are anticipated to result from the Proposed Action.

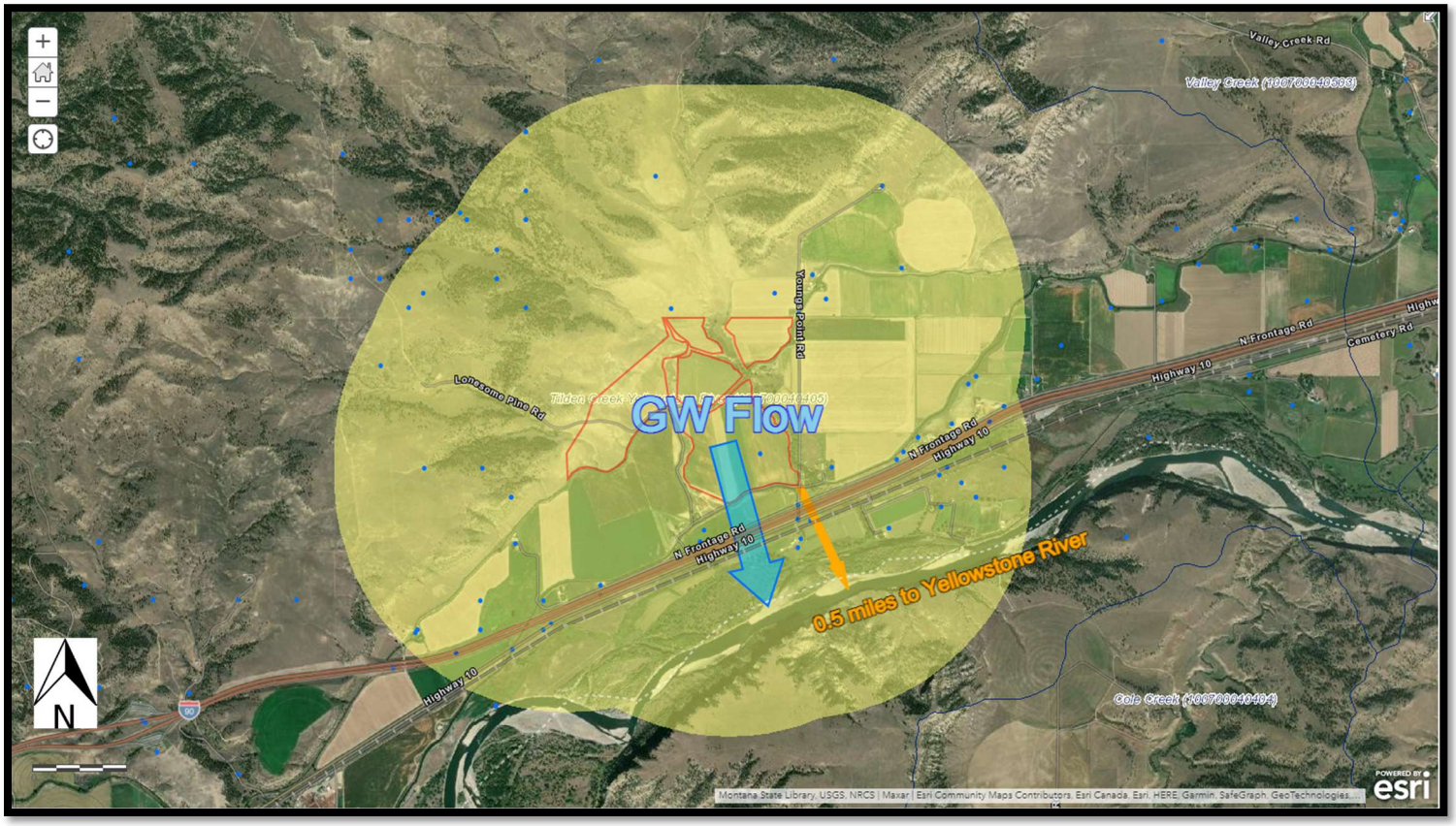
The Montana Bureau of Mines and Geology's Ground Water Information Center (GWIC) is DEQ's reference for well data in Montana. All wells located within one mile of the Site and documented by GWIC as of January 4, 2022, were considered in this analysis. Due to a database issue experienced between December and March of 2022 by MBMG, any wells finished after 2018 are not included in this assessment. Any well not documented in GWIC is not included.

If a well that did not appear in GWIC is proven to be within the 100-foot setback, or if a new well is developed within 100 feet of either Site, the boundaries would be adjusted to maintain this setback. See *Section 3.2.3* of this report for descriptions of the depositional environment beneath the Site.

One well exists within the boundaries of the Site and there are 53 groundwater production wells within a one-mile radius of the Site identified by GWIC (see **Figure 5**). Groundwater flow directions in the vicinity of the Site are assumed to be south-southeast toward the Yellowstone River, mimicking surface water drainage patterns (**Figures 4 and 5**). Groundwater production wells located in closest proximity to the Site report a range of static water levels from 14 to 24 feet below the ground surface (bgs). Drillers' boring logs indicate that these wells are completed at depths from 18 to 55 feet bgs with geologic sources listed as alluvium or sand and gravel. A well located within the boundaries of the Site (GWIC ID: 97666) has a static water level of 19 feet and is completed at a depth of 33.5 feet. Wells near the Site are generally comprised of topsoil, sand/clay, and sand/gravel layers. Based on the number of wells within a mile of the Site and relative groundwater depth listed for these wells, it can be assumed that the depth to groundwater at the Site is greater than the six feet minimum required by ARM 17.50.809(8).

Inspections and possible monitoring by DEQ would verify compliance with requirements for land application of septage at the AAR for the pasture grasses, corn, hay, and beans grown at the Site. This practice would be followed at the Site to ensure the absence of vertical percolation of septage below the soil treatment zone.

Figure 5: Location of Nearby Groundwater Production Wells
(GWIC wells in blue circles, approximate Site in red, flow direction arrow in blue, 1-mile radius yellow shaded circle around each parcel)



*Source: Esri/ArcGIS and GWIC/MBMG (**NOT TO SCALE**)*

3.2.5 AESTHETICS AND NOISE

The impact to aesthetics and noise from the Proposed Action would be minor. The analysis area is the Site and the surrounding area within one mile of the Site.

A private drive would be used to access the Site via Young's Point Road. The Site is not located on a prominent topographical feature but would be visible from Young's Point Road. No other development is anticipated at the Site. The Site is in a rural area on private property.

DEQ and/or the local county sanitarian would respond to complaints about odor to determine if wastes were not properly managed. With proper management, odors would be minimal. Naturally occurring bacteria in the soil use carbon in the waste as a fuel source. This activity results in the breakdown of wastes, which include odors. Usually, odors are only detected at the time and immediate vicinity (within feet) of the land application activity and are further mitigated by incorporation within six hours. Land application could occur daily. Dust caused by incorporation activities during the dry season would be reduced by the moisture content of septage.

The Proposed Action would be visible from Young's Point Road. Only one truck would access the Site at a time. Noise from the truck at the Site would resemble noises from agricultural and commercial activities currently occurring in the area. Therefore, impacts to aesthetics and noise would be minor.

3.2.6 HUMAN HEALTH & SAFETY

No impacts on human health and safety are anticipated to result from the Proposed Action.

Septage would be land applied at the Site. Septage would be incorporated into the soil surface within six hours of application and dust would be controlled. Livestock grazing is not anticipated at the Site. If grazing were to occur, it would not be permitted while land application activities occur or within 30 days of the most recent application, as per ARM 17.50.811 (5)(a).

Regarding COVID-19, the Environmental Protection Agency (EPA) expects a properly managed septic system to treat COVID-19 the same way it safely manages other viruses often found in wastewater. The World Health Organization (WHO) has indicated that "there is no evidence to date that COVID-19 virus has been transmitted via sewerage systems, with or without wastewater treatment." Remnant RNA (component virus proteins) in fecal matter has been used to track the relative prevalence of the virus in wastewater treatment plants. More research is needed in this area, but there is no evidence of COVID-19 transmission from exposure to treated or untreated wastewater to date. (EPA, 2020)

The Site is on private property and are accessed from Young's Point Road.

3.2.7 INDUSTRIAL, COMMERCIAL, AND AGRICULTURAL ACTIVITIES

No impacts to industrial and commercial activities are anticipated to result from the Proposed Action. Minor positive impacts to agricultural activities are expected due to the Proposed Action.

The Site is rural land and would not accommodate industrial or commercial activities. When land application occurs on an annual rotation (*Section 2.2.3*), crop production can occur and agricultural activities on the Site can continue. Land application of septage would improve soil health.

3.2.8 RECREATION, LAND USE, AND TOURISM

The impact to recreation and land use would be minor.

The Site is on private property. Because the Site is on private property, public recreation is already limited and would not be altered due to the Proposed Action. The public would need to request permission from the landowner to access private property. Because the Proposed Action would be occurring, no grazing could occur

within 30 days of the last application of septage, per ARM 17.50.811. The Proposed Action would impose limitations on the utilization of the Site for recreational activities until the Proposed Action ceases.

Surrounding properties include privately owned rangeland. Beyond the Site's boundaries, detection of odor would be temporary and greatly decreased with increased distance (see *Section 3.2.5*).

There would be no impact to tourism. Young's Point Road isn't a main corridor to tourist attractions in the area. Young's Point Road provides access to homes in the area, with access north of Montana Highway 10.

3.2.9 CULTURAL UNIQUENESS AND DIVERSITY

No impacts to cultural uniqueness and diversity are anticipated to result from the Proposed Action.

The State Historic Preservation Office (SHPO) conducted a resource file search for Section 33, Township 2 South, Range 22 East, which indicated there have been a few previously recorded sites within the area. Based upon ground disturbances in Section 33, Township 2 South, Range 22 East associated with agricultural activities and residential development, SHPO determined there is a low likelihood that cultural properties would be impacted, and a cultural resource inventory is unwarranted at this time.

3.2.10 DEMAND FOR GOVERNMENT SERVICES

The impact to demand for government services from the Proposed Action would be minor.

DEQ staff would provide guidance to RLF for septage land application activities at the Site, with assistance from the Stillwater County sanitarian as needed. Disposal logs showing volumes of waste applied by RLF at the Site are submitted to DEQ twice a year. Disposal logs would be reviewed by DEQ to ensure the AAR is not exceeded. Periodic inspections are performed by DEQ at all septic tank pumper land application sites. DEQ may obtain periodic soil samples for testing of nutrient levels to ensure compliance with the AAR for the Site.

3.2.11 SOCIOECONOMICS

Impacts to socioeconomics from the Proposed Action would be minor. In considering impacts to socioeconomics, DEQ analyzed both impacts on job force and impacts from the Proposed Action on real property values in the area surrounding the Site.

The Proposed Action is not expected to result in additional employees being hired, as employees currently employed by RLF would conduct necessary operations at the Site.

There is a lack of literature or studies on potential impacts from land application sites on surrounding real property values in Montana. Given the lack of analysis proving a direct and statistically significant link that land application sites devalue surrounding property, negative property value impacts from the Proposed Action are difficult to quantify. However, because land application activities resemble existing agricultural and commercial activities in the surrounding area, any negative impacts to adjacent and nearby property values are expected to be minor. Visually, the Proposed Action would resemble existing agricultural and commercial land uses in the surrounding area. Similarly, as discussed in *Section 3.2.5*, odors are expected to be of limited duration and limited to the immediate area surrounding the land application activities. As discussed in Section *3.2.4.2*, DEQ does not expect the Proposed Action to impact groundwater resources and thus does not expect impacts to groundwater resources to affect adjacent and nearby property values.

3.2.12 TRAFFIC

The impact to traffic from the Proposed Action would be minor.

There would be no significant increase in traffic on Young's Point Road. One pumper truck would access the Sites at a time. The Sites would be accessed via a private drive from Young's Point Road, accessed from Montana Highway 10. Young's Point Road currently supports daily traffic to homes in the area.

3.3 REGULATORY RESTRICTIONS

MEPA requires state agencies to evaluate regulatory restrictions proposed for imposition on private property rights because of actions by state agencies, including alternatives that reduce, minimize, or eliminate the regulation of private property (Section 75-1-201(1)(b)(iii), MCA). Alternatives and mitigation measures required by federal or state laws and regulations to meet minimum environmental standards, as well as actions proposed by or consented to by the applicant, are not subject to a regulatory restrictions analysis.

No aspect of the alternatives under consideration would restrict the use of private lands or regulate their use beyond the permitting process prescribed by the SDLA. The conditions that would be imposed by DEQ in issuing the license would be designed to ensure conformance of the Proposed Action to the environmental standards required by the SLDA, or to uphold criteria proposed and/or agreed to by RLF during application review. Thus, no further DEQ analysis is required beyond RLF's application review for protection of human health and the environment.

3.4 CUMULATIVE AND SECONDARY IMPACTS

The Site is currently pasture grass. The surrounding area consists of rural agricultural activities and residential homes (distanced from the Site). DEQ is not aware of any other proposed projects in the area.

Cumulative impacts are the collective impacts on the human environment when a specific action is considered in conjunction with other past, present, and future actions by location and type. No cumulative impacts were identified (**Table 3**).

Secondary impacts are those that occur at a different location or later time than the action that triggers the effect. No secondary impacts are expected due to the Proposed Action beyond those described in *Section 3*.

4. FINDINGS

The depth and breadth of the project are typical of a septage land application site. DEQ's analysis of potential impacts from the Proposed Action are sufficient and appropriate for the complexity, environmental sensitivity, degree of uncertainty, and mitigating factors provided by the Septic Rules for each resource considered.

To determine whether preparation of an EIS is necessary, DEQ is required to assess the significance of impacts associated with the Proposed Action. The criteria that DEQ is required to consider in making this determination are set forth in ARM 17.4.608(1)(a) through (g):

(a) The severity, duration, geographic extent, and frequency of occurrence of the impact;

(b) The probability that the impact will occur if the Proposed Action occurs; or conversely, reasonable assurance in keeping with the potential severity of an impact that the impact will not occur;

(c) Growth-inducing or growth-inhibiting aspects of the impact, including the relationship or contribution of the impact to cumulative impacts;

(d) The quantity and quality of each environmental resource or value that would be affected, including the uniqueness and fragility of those resources or values;

(e) The importance to the state and to society of each environmental resource or value that would be affected;

(f) Any precedent that would be set because of an impact of the Proposed Action that would commit DEQ to future actions with significant impacts or a decision in principle about such future actions; and

(g) Potential conflict with local, state, or federal laws, requirements, or formal plans.

The Site's location is described in *Section 1.4* of this Draft EA and includes approximately 199 acres of Richard Popp property located 4.8 miles southeast of Park City at 41 Young's Point Road in Stillwater County, Montana. If RLF renews their license and operations comply with the SDLA and its implementing rules, land application activities and DEQ site inspections would continue indefinitely.

The Site is not within sage grouse core habitat, general habitat, or connectivity area. It has no special agricultural designation. Operations would not adversely affect any threatened or endangered species.

The Proposed Action is expected to improve soils and crops grown at the Site, as described in *Section 3.2.2*.

The Proposed Action is not expected to impact surface water resources. Operational standards ensure that all the setback requirements from surface water are met and that land application doesn't occur on ***slopes that exceed 6%,*** as described in *Section 3.2.4.1* of this Draft EA.

The Proposed Action is not expected to impact groundwater. The depth to groundwater is greater than six feet as required. Land application at agronomic rates would ensure that no septage could percolate below the surface treatment zone.

DEQ has not identified any growth-inducing or growth-inhibiting aspects of the Proposed Action. However, access to the parcels on the Site for utilization by human recreation, crops, and livestock would be limited to meet the regulatory restrictions necessary to protect human health (ARM 17.50.811(4) and (5)). DEQ's approval is not a decision regarding, in principle, any future actions that DEQ may perform. Furthermore, approval doesn't set any precedent or commit DEQ to any future action. Finally, the Proposed Action does not conflict with any local, state, or federal laws, requirements, or formal plans.

The Proposed Action would meet the requirements of the SDLA, the Clean Air Act of Montana, the Montana Water Quality Act, ARM, and county ordinances. Based on a consideration of the criteria set forth in ARM 17.4.608, DEQ has determined that RLF's proposal to add the Site to its septic pumper license is not anticipated to significantly impact the quality of the human environment. Therefore, preparation of an EA is the appropriate level of review under MEPA.

5. OTHER GROUPS OR AGENCIES CONTACTED OR CONTRIBUTING TO THE EA

Stillwater County Environmental Health Department
United States Environmental Protection Agency
World Health Organization
United States Department of Agriculture
Montana Natural Heritage Program
Montana Historical Society State Historic Preservation Office
United States Geological Survey
Montana Bureau of Mines and Geology
US Fish & Wildlife Service
Montana Sage Grouse Habitat Conservation Program

6. AUTHORS

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Septic Tank Pumper Program

Date: March 10, 2022

7. REFERENCES:

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Montana Tech of the University of Montana, Montana Bureau of Mines and Geology (MBMG), Ground Water Information Center http://mbmggwic.mtech.edu/

United States Fish & Wildlife Service, Environmental Conservation Online System, 2022 https://ecos.fws.gov/ecp/report/species-listings-by-current-range-county?fips=30095

Montana Natural Heritage Program, 2022 http://mtnhp.org/default.asp

Montana Cadastral http://svc.mt.gov/msl/mtcadastral

Columbus, Montana Weather Averages Summary http://www.weatherbase.com/weather/weather.php3?s=63457&cityname=Columbus-Montana-United-States-of-America

Average Pan Evaporation Data by State https://wrcc.dri.edu/Climate/comp_table_show.php?stype=pan_evap_avg

Fertilizer Guidelines for Montana Crops, Montana State University, 2005 https://store.msuextension.org/publications/AgandNaturalResources/EB0161.pdf

Administrative Rules of Montana http://deq.mt.gov/Portals/112/deqadmin/dir/documents/Legal/Chapters/CH50-08.pdf

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